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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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HEWLETT-PACKARD COMPANY
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EXAMINER

TRAN, MY CHAU T

ART UNIT	PAPER NUMBER
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1639

DATE MAILED: 01/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/878,108	CHILDERS, WINTHROP D.	
	Examiner	Art Unit	
	My-Chau T. Tran	1639	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 27-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 and 27-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/14/03 has been entered.

Status of Claims

2. Applicant's amendment filed 9/12/03 is acknowledged and entered. Claims 11-26 are canceled by the amendment. Claims 1, 27-28, 31, and 34-35 are amended by the amendment.

3. Claims 1-10, and 27-35 are pending.

Withdrawn Rejections

4. Applicant's arguments, see pg. 6, line 26 to pg. 7 line 5, filed 9/12/03, with respect to the rejection under 35 USC 112, first paragraph (This is a new matter rejection.) for claims 29-30 have been fully considered and are persuasive. The rejection under 35 USC 112, first paragraph of claims 29-30 has been withdrawn.

5. The previous rejections under 35 USC 112, second paragraph, for claims 27-28 have been withdrawn in view of applicant's amendments of claims 27-28.

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6. The previous rejection under 35 USC 103(a) as being obvious over Balch (US Patent 6,083,763) in view of Stylli et al. (US Patent 5,985,214) for claims 1-10 and 27-30 has been withdrawn in view of applicant's amendments of claim 1.

7. Claims 1-10, and 27-35 are treated on the merit in this Office Action.

Maintained Rejections

8. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 102

9. Claims 1-10 and 27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Stylli et al. (US Patent 5,985,214).

Stylli et al. teaches an automated method and system for identifying chemicals having useful activity such as biological activities of chemicals and collecting informations resulting from such a process (col. 6, lines 1-24). The method comprise of testing a therapeutic chemical for modulating activity of a target such as cell surface proteins in a cell based assay (col. 38, lines 46-67; col. 39, lines 1-9). The method comprise of dispensing the reagents (pharmaceutical active agent) into the addressable sample wells, which contains a predetermined volume of the sample (cellular material) (col. 6, lines 25-40; col. 8, lines 14-18) (referring to claim 1). The electrically sensitive volume displacement unit can dispense a predetermined volume of 500 to 1 picoliter (col. 16, lines 39-44) (referring to claim 4). The wells are arranged in a two

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dimensional array such as a 96 well plate (col. 15, lines 42-44) (referring to claims 8-9). The method includes storing, managing, and retrieving data collected from the assay process (col. 29, lines 14-26) (referring to claim 1). The automated method can comprise of multiple dispensers for dispensing different reagents in a complex screening process (col. 33, lines 32-48) (referring to claim 10). Therefore, Stylli et al. anticipate the presently claimed invention.

Response to Arguments

10. Applicant's argument(s) directed to the above rejection under 35 USC 102(b) as being anticipated by Stylli et al. (US Patent 5,985,214) for claims 1-10 and 27-30 were considered but they are not persuasive for the following reasons.

Applicant argues that “[T]he Stylli reference is directed, ultimately, to the production of material rather than the confirmation of affect on cellular material as would be required in evaluating a potential pharmaceutically active agent” and with regard to claim 10 “[I]t is submitted that the Stylli reference falls to teach or suggest the step of interactively activating at least one second liquid ejection device”. Thus the method of Stylli does not anticipate the presently claimed method.

Applicant's arguments are not convincing since the method of Stylli et al. does anticipate the presently claimed method. The method of Stylli et al. is directed to “evaluation” of a potential pharmaceutical active agent (col. 2, lines 37-42) and in fact Stylli et al. disclosed the “[M]any different assays can be employed with the invention, such as biochemical and cell based assays” (col. 38, line 46 to col. 39, line 9). With regard to claim 10, which was address in the previous Office Action mailed 7/10/2003, Stylli et al. disclose that *‘the computer not only monitors the status of key sensors (e.g., reagent bottle pressure, liquid level, plate position, and*

positioning limit switches) but also provides the interface for generating specific liquid dispensation patterns and volumes to the high density plate' (col. 60, lines3-8) (refers to 'the step of interactively activating at least one second liquid ejection device').

New Rejections – Necessitated by Amendment

Claim Rejections - 35 USC § 112

11. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

12. Claim 35 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. (This is a new matter rejection.)

The instant claim 35 briefly recites an automated method for analyzing substances containing cellular material wherein the first volume is present as a plurality of volumes arranged in a three-dimensional array.

The recitation of 'a three-dimensional array' claimed in claim 35, have no clear support in the specification and the claims as originally filed. The specification in page 8 disclosed '*In a third embodiment, the cellular material is dispensed in two dimensional rectangular array*' (paragraph [0028]) is not support for '*a three-dimensional array*'. Because the limitation of the specification and claim 8 recites a two dimensional array, it does not support the limitation of the claim 35, which recites a three-dimensional array. Therefore, the scope of the invention as

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originally disclosed in the specification would not encompass the scope of the limitation of a three-dimensional array.

If applicants disagree, applicant should present a detailed analysis as to why the claimed subject matter has clear support in the specification.

Claim Rejections - 35 USC § 102

13. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

14. Claims 1, and 31-34 are rejected under 35 U.S.C. 102(b) as being anticipated by Stylli et al. (US Patent 5,985,214).

Stylli et al. teaches an automated method and system for identifying chemicals having useful activity such as biological activities of chemicals and collecting informations resulting from such a process (col. 6, lines 1-24). The method comprise of testing a therapeutic chemical (pharmaceutical active agent) for modulating activity of a target (col. 38, line 46 to col. 39, line 9; col. 42, line 36 to col. 43, line 1-10). The targets of a cell-based assay are associated with a cell (col. 39, lines 7-9) (cellular material) and modulating activity such as cell proliferation (col. 4, lines 12-32). The method comprise of dispensing the reagents (therapeutic chemical) into the

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addressable sample wells, which contains a predetermined volume of the sample (cellular material) (col. 6, lines 25-40; col. 8, lines 14-18) (referring to claim 1). The electrically sensitive volume displacement unit can dispense a predetermined volume of 500 to 1 picoliter (col. 16, lines 39-44) (referring to claim 4 and 33). The wells are arranged in a two dimensional array such as a 96 well plate (col. 15, lines 42-44) (referring to claims 8-9, and 34). The method includes storing, managing, and retrieving data collected from the assay process (col. 29, lines 14-26) (referring to claim 1). The automated method can comprise of multiple dispensers for dispensing different reagents in a complex screening process (col. 33, lines 32-48), and generating specific liquid dispensation patterns and volumes to the high-density plate (col. 60, lines 3-8) (referring to claims 10, and 31-34). Therefore, Stylli et al. anticipate the presently claimed invention.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

17. Claims 1, and 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stylli et al. (US Patent 5,985,214) and Pham et al. (US Patent 6,171,780 B1).

Stylli et al. teaches an automated method and system for identifying chemicals having useful activity such as biological activities of chemicals and collecting informations resulting from such a process (col. 6, lines 1-24). The method comprise of testing a therapeutic chemical (pharmaceutical active agent) for modulating activity of a target (col. 38, line 46 to col. 39, line 9; col. 42, line 36 to col. 43, line 1-10). The targets of a cell-based assay are associated with a cell (col. 39, lines 7-9) (cellular material) and modulating activity such as cell proliferation (col. 4, lines 12-32). The method comprise of dispensing the reagents (therapeutic chemical) into the addressable sample wells, which contains a predetermined volume of the sample (cellular material) (col. 6, lines 25-40; col. 8, lines 14-18) (referring to claim 1). The electrically sensitive volume displacement unit can dispense a predetermined volume of 500 to 1 picoliter (col. 16, lines 39-44) (referring to claim 4 and 33). The wells are arranged in a two dimensional array such as a 96 well plate (col. 15, lines 42-44) (referring to claims 8-9, and 34). The method includes storing, managing, and retrieving data collected from the assay process (col. 29, lines 14-26) (referring to claim 1). The automated method can comprise of multiple dispensers for dispensing different reagents in a complex screening process (col. 33, lines 32-48), and generating specific liquid dispensation patterns and volumes to the high-density plate (col. 60, lines 3-8) (referring to claims 10, and 31-34).

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The method of Stylli et al. does not expressly disclose that the array is a three-dimensional array.

Pham et al. disclose automated workstations for testing therapeutic for therapeutic activity (col. 22, line 43 to col. 23, line 4, and col. 28, lines 40-65). The automated workstations comprise a multiwell platform that can be arranged in two-dimensional arrays or three-dimensional arrays (col. 11, lines 44-47).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to include an array that is a three-dimensional as taught by Pham et al. in the method of Stylli et al. One of ordinary skill in the art would have been motivated to include an array that is a three-dimensional in the method of Stylli et al. for the advantage of providing multiwell platforms for measuring fluorescent events that occurs within the wells (col. 3, lines 17-19). One of ordinary skill in the art would have reasonably expectation of success in the combination of Stylli et al. and Pham et al. because both disclose automated workstations for testing therapeutic for therapeutic activity (Stylli: col. 38, line 46 to col. 39, line 9, and col. 42, line 36 to col. 43, line 1-10; Pham: col. 22, line 43 to col. 23, line 4, and col. 28, lines 40-65).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to My-Chau T. Tran whose telephone number is 703-305-6999. The examiner can normally be reached on Monday: 8:00-2:30; Tuesday-Thursday: 7:30-5:00; Friday: 8:00-3:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew J. Wang can be reached on 703-306-3217. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1235.

mct
January 10, 2004


PADMASHRI PONNALURI
PRIMARY EXAMINER